



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,743	05/03/2001	Jon Weil	476-2001	8046
23644	7590	11/30/2004	EXAMINER	
BARNES & THORNBURG P.O. BOX 2786 CHICAGO, IL 60690-2786			SALAD, ABDULLAHI ELMI	
			ART UNIT	PAPER NUMBER
			2157	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,743

Applicant(s)

WEIL ET AL.

Examiner

Salad E Abdullahi

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/26/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application has been reviewed. Original claims 1-28 are pending. The rejection cited stated below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, and 8-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Jardetzky et al. U.S. Patent No. 6,392,989[hereinafter Jardetzky].

As per claim 1, Jardetzky discloses a method of fault recovery in a multi-layer communications network having a transport layer topology and an overlay topology, in which adjacencies are defined between a plurality of network nodes, the method comprising, for each adjacency for which a recovery path is to be determined, modifying the overlay topology by removal of selected adjacencies (see col. 2, lines 54-65), attempting computation of a path, and if no path is available removing fewer selected adjacencies from the overlay topology and repeating said path computation(see col. 4, lines 36-67 and col. 9, lines 26-35).

As per claim 2, Jardetzky discloses the method as claimed in claim 1, wherein said

Art Unit: 2157

adjacencies are selected from a knowledge of the transport layer topology (see col. 2, lines 54-65).

As per claim 3, Jardetzky discloses a method of calculating a protection path for traffic carried on a main path in a multilayer communications network having a lower transport layer and an upper layer incorporating a plurality of routers, and in which adjacencies are defined between respective pairs of routers, the method comprising the steps of; defining a model of the network (see fig. 3b and col. 6, lines 13-27); defining in said model a hierarchy of protection levels, each said protection level being characterized by a respective set of broken adjacencies in said model (see col. 5, lines 6-52); attempting to calculate a recovery path for a selected protection level in said hierarchy col. 5, lines 6-52); and if no said path is available, repeating said calculation attempt for successive further protection levels in said hierarchy until a protection path is identified (see figs. 3A and 3B and col. 5, lines 6-52).

As per claim 4, Jardetzky discloses a method of calculating a protection path for traffic carried on a main path in a multi-layer communications network comprising a lower transport layer and an upper overlay incorporating a plurality of routers, there being a plurality of adjacencies defined between respective pairs of routers, wherein the method comprises the steps of:

Art Unit: 2157

defining a software model of the overlay of said network (see col. 6, lines 13-27);
defining in said model a hierarchy of protection levels for said main path, each said protection level being characterized by a respective set of one or more broken adjacencies in said model (see col. 6, lines 13-27);
selecting one said protection level and calculating a protection path avoiding the broken adjacencies associated with that protection level (see col. 5, lines 6-52);
determining whether the calculated protection path is available in the network (see col. 5, lines 6-52); and
if said calculated path is not available in the network, repeating said path calculation and determining steps for one or more further selected protection levels (see col. 5, lines 6-52).

As per claim 5, Jardetzky discloses a method as claimed in claim 4, wherein said protection levels are selected in order of hierarchy (see col. 6, lines 1-12).

As per claim 6, Jardetzky discloses a method as claimed in claim 5, wherein said protection path is calculated via a next hop algorithm (see col. 4, lines 36-46).

As per claim 8, Jardetzky discloses the method as claimed in claim 7, wherein said network incorporates a transport layer comprising a plurality of switches interconnected by optical fiber paths (see fig. 1A).

As per claim 9, Jardetzky discloses the method as claimed in claim 7, wherein the

Art Unit: 2157

network model topology is defined by a first list of adjacencies representing the overlay topology, and a second list of paths, one for each adjacency (see fig. 1A and 3A and col. 5, lines 10-52).

As per claim 10, Jardetzky discloses the method as claimed in claim 9, and further comprising editing the network model topology by selecting sequentially the adjacencies in the overlay topology, testing each adjacency against assumptions about what equipment has failed in light of a hypothesized IP layer adjacency loss indication, and, if the adjacency passes the test, removing it from the topology (see fig. 1A and 3A and col. 5, lines 10-52).

As per claim 11, Jardetzky discloses the method as claimed in claim 10, wherein said transport layer comprises a synchronous network.

As per claim 12, Jardetzky discloses the method as claimed in claim 11, wherein said network is a packet network (see col. 1, lines 35-45).

As per claim 13, Jardetzky discloses the method as claimed in claim 12, wherein said network is a multi-protocol label switched network (see col. 1, lines 35-45).

As per claim 14, Jardetzky discloses the method as claimed in claim 13, wherein said network incorporates one or more virtual private networks (see col. 1, lines 35-45).

Art Unit: 2157

As per claim 20, Jardetzky discloses a network manager as claimed in claim 19, and embodied as software in machine-readable form on a storage medium (see col. 3, lines 57-58).

As per claims 15-19, the claim include features similar to those of claim 1, thus claims 15-19 are rejected same rational as claim 1.

As per claims 21-18, the claim include features similar to those of claims 2-14, thus claims 21-28 are rejected same rational as claim 2-14.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2157

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 7, is rejected under 35 U.S.C. 103(a) as being unpatentable over Jardetzky as applied to claim 1 above, and further in view of Bader U.S. Patent No. 6,567,194[hereinafter Bader].

As per claim 7, Jardetzky disclose substantial features of the claimed invention as discussed above with respect to claim 6

Jardetzky is silent regarding:

wherein a protection level is selected according to a class of traffic carried on the path to be protected.


Bader discloses a communication network and protection path mechanism wherein a protection level is selected according to a class of traffic (i.e., type of traffic) carried on the path to be protected (see col. 6, lines 56-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teaching of Bader such as the protection level is selected according to a class of traffic carried on the path to be protected into the system of Jardetzky in order to provide prioritized link protection based type of traffic, thus providing prioritized QOS mechanism to improve the flow traffic of the network

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salad E Abdullahi whose telephone number is 571-272-4009. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Abdullahi Salad
Examiner AU 2157
11/28/2004